

July 17, 1992

TO: Wayne Hedberg, Permit Lead

FROM: Tony Gallegos, Reclamation Engineer *dag*

RE: Review of Jumbo Mining Company, Mizpah Pit & New Heap Leach Pad  
Response dated March 25, 1992, M/027/007, Millard County, Utah

I have completed my review of Jumbo Mining Company's (JMC) response dated March 25, 1992. My review consisted of comparing my comments made in the Division's January 14, 1992, letter to JMC with this latest JMC response. All of my questions raised in the January 1992 review have been answered adequately. Please find attached a revised reclamation surety estimate for the combined projects.

I wish to point out that JMC agreed to cover the Mizpah waste dumps with 6 inches of topsoil material, provided topsoil material was available. Approximately 8,300 cubic yards of topsoil is needed to cover the dumps. The Division agreed to grant a topsoil salvaging variance to JMC in the September 6, 1990 review letter, provided the JMC/BLM soil survey demonstrates that little or no topsoil material is available. I am not aware of the results of this survey or if the variance decision has been made. The revised reclamation estimate assumes that adequate topsoil is available for placement on the dumps.

attachment

**M027007.AAG**

# RECLAMATION ESTIMATE

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Jumbo Mining Company

Drum Mine – Mizpah Pit & New Heap Leach Millard County

Millard County

M/027/007

last revision

7/17/92

Prepared by Utah State Division of Oil, Gas & Mining

## Reclamation Details – Mizpah Pit Area

- Rip: roads, ramps & pit floors to 1.5 ft depth (2.9 acre)
- Contour & regrade waste dumps to 3h:1v slopes (10.3 acres)
- Grade/shape pit benches & highwalls to 1:1 or less (3.8 acre)
- Pit benches to be covered with waste mtl 12 " deep, (est 1.9 acre)
- Dumps to be covered with 6" topsoil (8,300 CY est, 10.3 acres)
- Clean up & removal of trash from entire site
- Scarify, seed & mulch: dumps, pit floors, roads (0.5 acre), also pit benches, and topsoil stockpiles (0.8 acre)
- Construct berms around western perimeter of pit (1800 ft)
- Possible variance to dump topsoiling if soil surveys support this
- Total disturbed area for the Mizpah pit = 18.6 acre
- Total area reclaimed at the Mizpah Pit = 15.2 acre

Description	Amount	\$/Unit	Cost-\$
Ripping to 1.5ft depth, 0.30 MPH	2.9 acre	814	2,361
Contour & regrading	10.3 acre	394	4,058
Grade/shape pit benches	3.8 acre	1129	4,290
Spread waste mtl on benches	4,840 CY	1.04	5,034
Spread topsoil on dump areas	8,300 CY	0.68	5,644
Clean up & remove trash	14.2 acre	47	667
Scarify, seed & mulch	16.6 acre	286	4,748
Construct berm around pit	1,800 ft	1.20	2,160
Mobilization	1 sum	5000	5,000
SUBTOTAL			33,962
+ 10% CONTINGENCY			3,396
SUBTOTAL			37,358
+ 5 yr ESCALATION(1.27%)			2,433
TOTAL			39,791
ROUNDED TOTAL IN 1997-\$			\$39,800

average cost per disturbed acre = \$2,140 per acre

## RECLAMATION ESTIMATE

page 2 of 2

Jumbo Mining Company

Drum Mine – Mizpah Pit &amp; New Heap Leach Millard County

Millard County

M/027/007

last revision

7/17/92

Prepared by Utah State Division of Oil, Gas &amp; Mining

**Reclamation Details – New Heap Leach Area**

- Ripping new roads; contour, regrade & topsoil heap
- Backfill, regrade & topsoil drainage trench
- Regrade & topsoil clay pit area (1.7 acre assumed)
- Scarify & seed all regraded areas; clean up & remove trash from site
- Construct berm around perimeter of clay pit (JMC estimate)
- Heap decommission by intermittent fresh water rinsing until neutralize
- ASSUMED heap decommissioning to take 45 days
- Exposed piping removed from heap & buried
- Exposed heap liner & pond liners punctured & buried
- Total reclaimed area = ???, total disturbed area = 17.77

Description	Amount	\$/Unit	Cost-\$
Ripping to 1.5ft depth, 0.30 MPH	0.72 acre	814	586
Contour & regrad heap sides	7.91 acre	394	3,117
Backfill drainage trench	3,200 tons	0.25	800
Spread topsoil on heap	15,606 CY	0.68	10,612
Spread topsoil on clay pit	1,663 CY	0.68	1,131
Spread topsoil on drainage trench	134 CY	0.68	91
Clean up & remove trash	17.77 acre	47	835
Scarify, seed & mulch	9.08 acre	286	2,597
Construct berm around clay pit	500 ft	1.20	600
Equipment-heap decommission	45 days	25	1,125
Labor-heap decommission	45 days	500	22,500
Miscellaneous-heap decommission	45 days	25	1,125
Sampling & analysis-heap decommission	JMC est		700
SUBTOTAL			45,819
+ 10% CONTINGENCY			4,582
SUBTOTAL			50,401
+ 5 yr ESCALATION(1.27%)			3,283
TOTAL			53,683
ROUNDED TOTAL IN 1997-\$			\$53,700
average cost per disturbed acre = \$3,022 per acre			

**COMBINED RECLAMATION ESTIMATE TOTAL IN 1997-\$ \$93,500**